North Carolina Department of Environment and Natural Resources
Division of Soil and Water Conservation

Michael F. Easley, Governor
William G. Ross Jr., Secretary
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September 4, 2007

To: N.C. Division of Water Quality

From: Manly Wilder

RE: Comments on the Proposed Water Supply Nutrient Strategy for Jordan Lake

The Division of Soil and Water Conservation has had the opportunity to review the Proposed Water Supply Nutrient Strategy for B. Everett Jordan Reservoir and offers several comments in response.

DWQ was correct to model the Jordan Strategy from the successful efforts in the Neuse and Tar-Pamlico. However, we need to learn from the successes and failures of the Neuse and Tar-Pamlico rules. Many of the issues discussed below were lessons learned from the other river basin rules.

NPS Loading Estimates from Agriculture - Agriculture, an existing land use, has been taking responsibility for its actions for more than two decades. It appears that the estimates of nutrient loading from agriculture in the proposed rules gives little consideration for the benefits of agricultural best management practices that have been installed over the last 20 years through the Agriculture Cost Share Program (ACSP) and other similar programs.

Since being established in 1984, the ACSP has assisted agricultural producers with voluntarily installing best management practices throughout the Jordan Reservoir watershed. These actions have significantly reduced the loading of nutrients, sediment, and other potential water quality contaminants to the watershed. The following is a conservative estimate of the *completed* BMP installations in the Jordan Reservoir watershed achieved through the ACSP at a cost of more than $6.1 million. The tables break installations into two categories, practices installed prior to and after January 1, 2002, corresponding to the proposed baseline period.

Lower New Hope Arm

BMP	Baseline (1984 – 2001)	January 2002 – June 2007
Livestock exclusion – stream protection systems		4,243 feet
Conservation tillage/long term no-till	18 acres	11.5 acres
Sod-based rotation	453.41 acres	
Diversions	845 feet	800 feet
Grassed waterway	20.15 foot print acres	
Field border	12.12 foot print acres	

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Terraces	8,409 feet	
Conversion to trees or grass	131.9 acres	46.3 acres
Waste storage pond	1 unit	
Critical area planting		0.4 acres

Upper New Hope Arm

BMP	Baseline (1984 – 2001)	January 2002 – June 2007
Livestock exclusion – stream protection systems	500 feet	500 feet
Conservation tillage/long term no-till	123 acres	148.9 acres
Sod-based rotation	322.4 acres	
Diversions	4,426 feet	
Grassed waterway	8.81 foot print acres	
Field border	9.67 foot print acres	
Conversion to trees or grass	120.6 acres	10.4 acres
Critical area planting		0.5 acres
Stripcropping	56.8 acres	0.4 acres
Waste storage pond	4 units	
Waste application systems	3 units	

Haw River Arm

BMP	Baseline (1984 – 2001)	January 2002 – June 2007
Livestock exclusion – stream protection systems	178,370 feet	76,105 feet
Conservation tillage/long term no-till	6,150.07 acres	3,439.09 acres
Sod-based rotation	12,128.56 acres	781.12 acres
Diversions	125,402.5 feet	2,641 feet
Grassed waterway	586.96 foot print acres	92.23 foot print acres
Field border	469.33 foot print acres	55.76 foot print acres
Terraces	2,929 feet	
Conversion to trees or grass	6,203.64 acres	905.31 acres
Waste storage pond	64 units	1 unit
Critical area planting	105.66 acres	18.23 acres
Dry stack	5 units	5 units
Filter strip	2.7 acres	
Stripcropping	8,831.97 acres	17.3 acres
Sediment control basin	2 units	2 units
Waste impoundment closure	4 units	4 units

These tables do not include the numerous practices that were installed through federal conservation programs, or the many BMPs that landowners installed without any financial assistance.

While proceeding with this rule making process, it is important to note that many of the cropland acres in the Jordan Lake watershed are already buffered. It is not generally feasible for farmers in this watershed to farm land that is immediately adjacent to streams, as some farmers do in the eastern part of the state. This fact raises even more questions about the accuracy of the nutrient loading estimates from agriculture.

Nutrient Management – It is our experience in the Neuse and Tar-Pamlico that farmers in many of the upper basin counties are not over applying nutrients to their pastureland or cropland. By making them develop a nutrient management plan, the EMC will likely be "encouraging" them to increase the amount of fertilizer that they apply. A more detailed study of the area should be conducted to determine the potential benefit of this requirement for agriculture in this watershed.

Comparing an Average Baseline with an Annual Report – Currently, we are taking an annual snapshot of agriculture in the Neuse and comparing the results with an average baseline. This has caused some issues in the upper reaches of the Neuse due to the farming practices in this region. Agriculture is a dynamic system; it does not operate on a calendar year basis. Cropland rotations play a key role in reporting agricultural activities correctly. If it is determined that an average baseline be used for Jordan Lake, we recommend reporting the average agricultural activity from 2002 to date or use 1997 as a steady, baseline year.

Financial Support for BMP Implementation and Technical Assistance – Funding for BMP implementation for Neuse and Tar-Pamlico farmers relied extensively on the N.C. Agriculture Cost Share Program. Statewide funding for the ACSP has been reduced by more than $1.4 million since 2001.

The strategy assumes that the local committees will be responsible for reporting, farmer signup, strategy development, etc. This will require a very intensive effort. In both the Neuse and Tar-Pamlico basins, these activities largely fell upon the local soil and water conservation districts. For these previous efforts, the Soil and Water Conservation Commission, EPA 319 program, and Natural Resources Conservation Service provided funding to support additional technical assistance staff in the local districts. Unfortunately, the current budget for Agriculture Cost Share Program Technical Assistance and for NRCS makes it considerably more difficult to fund additional staff positions to support these activities. Coordination between local districts, county governments, the Division of Soil and Water Conservation and the Division of Water Quality need to begin early in the rulemaking process to ensure that additional technical assistance funding can be secured and sustained.

The strategy should include a call for greater funding for both BMP implementation and technical assistance through the Agriculture Cost Share Program, EPA 319 programs, and other potential funding sources.

Developed Land Uses – Other land uses have not demonstrated the same level of commitment and responsibility to natural resource stewardship as that of the agricultural sector. Commercial and residential development has consumed vast areas of former farmland and forestland with little, if any, BMPs installed to control stormwater. Minimal effort is made to utilize best management practices other than sedimentation and erosion control practices that are required only during the construction phase. We acknowledge that some local governments are now being captured by the Phase II Stormwater requirements, but these requirements do not significantly address pre-existing sources of nutrients from stormwater runoff.

We also acknowledge the potentially high cost of retrofitting BMPs into developed areas and wish to make local governments aware that local soil and water conservation districts stand ready to assist local governments with technical and financial assistance for stormwater BMPs through the newly authorized Community Conservation Assistance Program (CCAP). While funding for this new program has been modest (mostly grant funded to date), local districts are now building the infrastructure to deliver federally, state, and locally funded programs through CCAP. This will enable districts to address this important source of nutrients and other pollutants as they have done for the agricultural community for 70 years.

We also respectfully submit the following comments on specific rule language:

15A NCAC 02B .0262 Jordan Water Supply Nutrient Strategy: Watershed Nutrient Reduction Goals

- Considering the relatively small number of agricultural operations that remain in the Upper New Hope portion, the nutrient reduction goals for the Upper New Hope arm of the Jordan Reservoir will be extremely difficult to achieve. Most agricultural operations have used nutrient-reducing BMPs such as field borders and nutrient management for many years prior to the baseline period. Consequently, the opportunity to utilize the collective compliance strategy proposed in the agricultural rule to further reduce nutrient losses to the extent required in this watershed may be limited, resulting in farmers having few options for achieving compliance.
- Acknowledging the great amount of work that will be required to achieve and maintain the goals in each of the three portions of the watershed, local soil and water conservation districts and the Division of Soil and Water Conservation will commit to assist landowners and land users to implement BMPs toward achieving the respective goals.

15A NCAC 02B .0264 Jordan Water Supply Nutrient Strategy: Agriculture

- Under (4) APPLICABILITY, please include text that was developed and incorporated into the Tar-Pamlico River Basin Nutrient Sensitive Waters Management Strategy: Agricultural Nutrient Control Strategy (15 NCAC 02B .0256 (b) (4).

(4) Certain tree-harvesting activities described and defined as follows.

(A) The one-time harvest of trees on land within a riparian buffer described in 15A NCAC 02B .0259 that was open farmland on September 1, 2001. This one-time harvest of trees may be conducted within one tree cropping interval only under a verifiable farm plan that received final approval from a local agricultural agency on or after September 1, 2001 and that expressly

allowed the harvest of trees no earlier than 10 years after the trees are established and the return of the land to another agricultural pursuit.

(B) The one-time harvest of trees on land within a riparian buffer described in 15A NCAC 02B .0259 that had trees established under an agricultural incentive program as of September 1, 2001.

(C) All tree harvesting described in Subparagraphs (b)(4)(A) and (b)(4)(B) of this Rule shall comply with Forest Practices Guidelines Related to Water Quality codified at 15A NCAC 01I. The nutrient removal functions that were provided by trees prior to their harvest shall be replaced by other measures that are implemented by the owner of the land from which the trees are harvested.

(D) The following definitions shall apply to terms used in Subparagraphs (b)(4)(A) through (b)(4)(C) of this Rule.

(i) "Agricultural incentive program" means any of the following programs and any predecessor program to any of the following programs:

(I) Agriculture Cost Share Program for Nonpoint Source Pollution Control established by G.S. 143-215.74.

(II) Conservation Reserve Enhancement Program established by 7 C.F.R. Part 1410 (January 1, 2001 Edition) and 15A NCAC 06G .0101 through 15A NCAC 06G .0106.

(III) Conservation Reserve Program established by 7 C.F.R. Part 1410 (January 1, 2001 Edition).

(IV) Environmental Quality Incentives Program established by 7 C.F.R. Part 1466 (January 1, 2001 Edition).

(V) Wetlands Reserve Program established by 7 C.F.R. Part 1467 (January 1, 2001 Edition).

(VI) Wildlife Habitat Incentives Program established by 7 C.F.R. Part 636 (January 1, 2001 Edition).

(ii) "Local agricultural agency" means the North Carolina Cooperative Extension Service, the Farm Services Agency of the United States Department of Agriculture, the Natural Resources Conservation Service of the United States Department of Agriculture, a Soil and Water Conservation District created pursuant to G.S. 139-5, or their successor agencies.

(iii) "Open farmland" means the footprint of land used for pasture or for crops or horticultural products other than trees. Open farmland may contain scattered trees if an open canopy existed on September 1, 2001 as determined from the most recent aerial photographs taken prior to September 1, 2001 for the Farm Services Agency of the United States Department of Agriculture.

(iv) "Tree" means a woody plant with a diameter equal to or greater than five inches when measured at a height of four and one-half feet above the ground.

(v) "Tree cropping interval" means the time required to establish and grow trees that are suitable for harvesting. The tree-cropping interval shall be set out in the farm plan and shall be no less than 10 years after the trees are established.

- The aim of this proposed change is to ensure that the rule requirements do not serve as a disincentive for landowners to participate in conservation programs that encourage establishment of riparian buffers. This language could be added to item (4).
- Under (7) STANDARD BEST MANAGEMENT PRACTICES (BMPs) (b), we request that the Soil and Water Conservation Commission be listed in place of the Watershed Oversight Committee, as the Commission has the statutory authority to approve BMPs. An additional sentence may be added stating that the Watershed Oversight Committee may present BMPs for approval by the Soil and Water Conservation Commission.
- Under (8) WATERSHED OVERSIGHT COMMITTEE (b) ROLE (vi), replace *approve* with *recommend* standard BMPs as described in Sub-Item (7)(b).

15A NCAC 02B .0265 Jordan Water Supply Nutrient Strategy: Stormwater Management for New Development

- Under (4) RULE IMPLEMENTATION, it specifies that all local governments must develop, adopt and implement local stormwater management programs. Throughout this section, there is no discussion of ramifications if local governments choose not to complete or adequately address any step in this process. In the agriculture rule, accountability is built into every item to insure that reductions are met in a timely manner. This is missing in the stormwater management for new development rule, and must be adequately incorporated.
- There is no timeline by which this rule aims to achieve the initial goals, and this pertinent information must be included. The agriculture rule aims to achieve the goals within 5 – 8 years, other land uses should follow similar timelines.

15A NCAC 02B .0266 Jordan Water Supply Nutrient Strategy: Stormwater Management for Existing Development

- This is a great addition to the nutrient management strategy, and the Division fully supports this rule. This existing land use must be included in the rules, as they are a current loading source. Neither the Neuse nor Tar-Pamlico River Basin nutrient management strategies included this rule, but we encourage incorporating this rule language into both of the existing nutrient management strategies. The existing nutrient management strategies have experienced limited water quality improvement because this important loading source was not included, as well as the limitations of the stormwater rules that do not capture all of the development that is completed in these basins.
- Under (4) RULE IMPLEMENTATION, it specifies that all local governments must develop, adopt and implement local stormwater program and loading reduction programs. Throughout this section, there is no discussion of ramifications if local governments choose not to complete or adequately address any step in this process. In the agriculture rule, accountability is built into every item to insure that reductions are met in a timely manner. This is missing in the stormwater management for existing development rule, and must be adequately incorporated.

- There is no timeline by which this rule aims to achieve the initial goals, and this pertinent information must be included. The agriculture rule aims to achieve the goals within 5 – 8 years, other land uses should follow similar timelines.

15A NCAC 02B .0267 Jordan Water Supply Nutrient Strategy: Protection of Existing Riparian Buffers

- Under (6) EXEMPTION WHEN EXISTING USES ARE PRESENT AND ONGOING (a), a specific date should be included to determine uses in riparian buffers. If a date is not set, many buffers may be removed in the watershed until the effective date of the rule. In the Tar-Pamlico River Basin Nutrient Sensitive Waters Management Strategy: Protection and Maintenance of Existing Riparian Buffers (3) (b) (i) includes a date that a use shall be considered existing as of January 1, 2000. The Division encourages adding a date that is current (2007) to the rule to avoid any unnecessary loss of riparian buffers.

15A NCAC 02B .0272 Jordan Water Supply Nutrient Strategy: Riparian Buffer Mitigation Fees

- Under (1) (a) there is a typographical error on line 16. Replace ($2/acres) with ($34,092/acre)

I encourage you to contact Julie Henshaw at Julie.Henshaw@ncmail.net or 919-715-9630 if you need further clarification or discussion about any of the Division's comments.